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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,413	12/05/2003	Tom Tary	TAR50001	8386

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EXAMINER

SAN MARTIN, EDGARDO

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,413

Applicant(s)

TARY ET AL.

Examiner

Edgardo San Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/31/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Canada on September 30, 2003. It is noted, however, that applicant has not filed a certified copy of the 2,443,427 application as required by 35 U.S.C. 119(b).

Specification

2. The disclosure is objected to because of the following informalities:
- All the occurrences of reference number "121" should be change to - - 131 - - throughout the whole specification;
 - On page 10, line 2, "Figure 2" should read - - Figure 1 - -;
 - On page 10, line 19, "female" should read - - male - -;
 - On page 11, line 11, "113" should read - - 122 - -;
 - On page 14, line 19, "502" should read - - 503 - -;
 - On page 16, line 14 reference number "613" refer to a "bulkhead" and on peg 18, line 8, reference number "613" refer to a "dielectric".

Appropriate correction is required.

Claim Objections

3. Claims 2, 8, 10, 12 and 13 are objected to because of the following informalities:
- The use of the phrase “and/or” render the claims indefinite because it is not clear if the limitations are to be considered in combination or in the alternative;
 - There are two claims numbered as 12, the claims after the first claim 12 will be considered as 13 – 27, respectively;
 - Applicant is advised that should claim 10 be found allowable, claims 12 and 13 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 5, 7, 8, 10, 12, 13, 15, 16, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Chien (US 5,266,755).

With respect to claims 1, Chien teaches a muffler assembly used for a boat or vehicle (Figs.2 and 3), the muffler assembly being installed between the engine and the engine exhaust discharge point of the boat or vehicle, the muffler assembly having a generally permanent outer housing (Figs.2 and 3, Item 11) and a removable and replaceable internal core assembly (Figs.2 and 3, Item 30) which is inserted into and removed from the permanent outer housing, the muffler assembly and the internal core assembly having guide and positioning elements (Figs.2 and 3, Items 331, 31 and 16) to correctly position the internal core assembly within the outer housing (Figs.2 and 3; Col.1, Line 46 – Col.2, Line 56).

With respect to claims 2 – 5, 7 and 8, Chien teaches the limitations described in the claims (Figs.2 and 3; Col.1, Line 46 – Col.2, Line 56).

With respect to claims 10, 12 and 13, Chien teaches a replaceable internal core assembly (Figs. 2 and 3, Item 30) for a muffler assembly (Figs. 2 and 3), the internal core assembly being removable from the muffler assembly and comprising at least one sound reducing element or at least one emission reduction element (Figs. 2 and 3, Item

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4; Col.2, Lines 25 – 30), a sealing plate (Figs. 2 and 3, Item 33) adapted to engage with the housing (Figs. 2 and 3, Item 11) and to form a seal between the housing and the internal core assembly and means to guide (Figs. 2 and 3, Items 331, 31 and 16) the internal core assembly into the housing and to maintain the internal core assembly in a removable relationship with the housing (Figs.2 and 3; Col.1, Line 46 – Col.2, Line 56).

With respect to claims 15 and 16, Chien teaches a method of installing a replaceable internal core assembly (Figs.2 and 3, Item 30) within a muffler assembly having a housing (Figs.2 and 3, Item 11) comprising the steps of inserting the replaceable internal core assembly through an opening in the housing, correctly positioning the internal core assembly within the housing and sealing the internal core assembly with and retaining the internal core assembly within the housing in a removable relationship with the housing; wherein the internal core assembly is correctly positioned within the housing using guide means (Figs.2 and 3, Items 331, 31 and 16) on either of the housing or the internal core assembly (Figs.2 and 3; Col.1, Line 46 – Col.2, Line 56).

With respect to claims 25 and 26, Chien teaches a method of treating exhaust emanating from an engine comprising inserting a cartridge (Figs.2 and 3, Item 30) into a muffler casing (Figs.2 and 3, Item 11), allowing the exhaust from the engine to enter the cartridge, treating the exhaust within the cartridge to remove environmentally objectionable materials from the engine exhaust and allowing the treated exhaust to pass from the cartridge, and wherein the exhaust is treated by a catalyst within the cartridge (Figs.2 and 3, Item 4) (Figs.2 and 3; Col.1, Line 46 – Col.2, Line 56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 9, 11, 14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chien (US 5,266,755) in view of Yamaguchi et al. (US 5,969,299).

With respect to claim 6, Chien teaches the limitations discussed in a previous rejection, but fail to disclose the limitations described in claims 6, 9, 11, 14, 17 and 18.

On the other hand, Yamaguchi et al. teach a muffler assembly (Fig.5, Item M) comprising a replaceable internal core assembly (Figs.2 and 5, Item A) wherein a guide and positioning elements include an exhaust entry pipe (Fig. 2 and 5, Item 21) and a complementary female pipe (Fig. 2 and 5, Item 7) adapted to fit (Figs.2 and 5, Items 9 and 10) with the exhaust entry pipe.

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ the Yamaguchi et al. replaceable configuration with the Chien design because it would provide an efficient manner of removable securing the internal core assembly within the muffler while improving the sound attenuating characteristic of the muffler by providing baffles creating multiple expansion chambers, the whole design would provide a system wherein the maintenance of the internal core assembly is facilitated, and an exhaust system having desired characteristics that could

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be provided at a low cost by combining an appropriate internal core assembly with the muffler.

With respect to claims 9, 11, 14, 17, 18, Yamaguchi et al. teach wherein the means to maintain the internal core assembly within the housing is a threaded connection (Figs.2 and 5, Item 32), and wherein the internal core assembly further includes a tailpipe (Figs.2 and 5, Item 23) extending from the sealing plate for emitting the engine exhaust.

6. Claims 19 – 24 and 27 and rejected under 35 U.S.C. 103(a) as being unpatentable over Abbe et al. (US 4,858,722) in view of Chien (US 5,266,755).

With respect to claims 19, 20 and 22, Abbe et al. teach a cartridge (Fig.3, Item 20) for insertion into a muffler casing (Fig.3, Item 60), the cartridge containing at least one exhaust acoustical treatment element (Fig.2) and being sealed by a gas tight enclosure (Figs.2, Item 26) prior to installation in the muffler casing, the cartridge containing an entrance (Fig.2, Item 25) for the ingress of exhaust from an engine and an exitway (Fig.2, Item 45) for the egress of the exhaust following treatment of the exhaust within the cartridge, but fail to disclose wherein the exhaust treatment element is of a catalytic nature.

Nevertheless, Chien teaches a cartridge (Fig.2, Item 30) for insertion into a muffler casing (Fig.2, Item 11), the cartridge containing at least one exhaust treatment element (Fig.2, Item 4; Col.2, Lines 25 – 30).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ the Chien exhaust treatment element with the Abbe

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et al. design because it would provide a muffler that could reduced sound produced by an engine and clean the exhaust produced by the engine by absorbing, filtering and removing pollutants present in the exhaust.

With respect to claim 21, Abbe et al. teach comprising retention means (Figs.2 and 3, Item 43) to secure the cartridge within the casing during operation of the engine and entry of exhaust from the engine into the cartridge.

With respect to claim 24, Chien teaches comprising an end cap (Fig.2, Item 33) to secure the cartridge (Fig.2, Item 30) within the casing and to act on the cartridge during operation of the cartridge and casing.

With respect to claims 23 and 27, the Examiner takes Official Notice that it is well known in the art of catalytic converters to employ electric power to further treat the exhaust gas. The electric power would further clean the exhaust gas by assuring the reduction of unburned pollutants present in the exhaust.

Conclusion

7. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

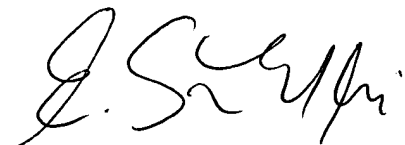
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext.33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martín
Primary Examiner
Art Unit 2837
Class 181
March 19, 2006